

DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE

DOMINION EXPERIMENTAL FARMS

FARM BUSINESS IN QUEBEC

For the Year ending June 1, 1920

*A Second Agricultural Survey in Six Counties
in Quebec Province*

Made by

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FARM BUSINESS IN QUEBEC

A SECOND AGRICULTURAL FARM SURVEY IN SIX COUNTIES

In order to secure information representing the true situation of farm business in Quebec, in so far as possible, a preliminary agricultural farm survey was carried out by the writer during 1919, for the Animal Husbandry Division, Central Experimental Farm, Ottawa. This farm survey was made in six representative districts of six counties in the province of Quebec. The information obtained, and embodied in bulletin number 96 of the regular Experimental Farm series, was such as to indicate the necessity of continuance, covering more ground, if possible, another year. Definite plans were made, therefore, and the writer arranged to conduct, during 1920, a survey along the same lines as that of 1919 with double the number of farms.

METHODS OF SURVEY

The methods used in obtaining the information were very much the same as those of the previous survey. In order to make results comparable, in a measure, with those of similar lines of work conducted in other provinces of Canada and in the United States, very similar methods were employed, excepting occasional necessary modifications due to local conditions.

In 1919, the survey was carried on in one representative district in six counties, where Illustration Stations already existed, 25 to 30 representative farms being surveyed in each district chosen, in a radius of five miles around each Illustration Station. As the survey to be carried out in 1920 could not, for various reasons, be made on a comparative basis, it was thought that more information could be obtained by choosing farms for survey in a greater number of districts or parishes in each county. So, instead of using the same centres as in 1919, some fifty farms were surveyed from all the parishes surrounding the parish chosen in 1919. Following this method, 10 or 12 representative farms were surveyed in each four or five parishes surrounding the parish or district surveyed last year. The number of farms surveyed varied with the importance of the parishes of that particular section. However, in compiling this report as concisely as possible and, at the same time, to determine the findings in all the parishes surveyed in each county would concur with the findings obtained last year, all the parishes surveyed in one county are treated as one group. Thus, when the reader subsequently peruses results obtained in, for example, L'Assomption district, it will be understood, unless otherwise stated, that these results are the average of figures obtained on 50 farms surveyed in L'Epiphanie, Repentigny, St. Paul and St. Sulpice parishes, each parish supplying a proportionate number of farms. Again, when studying the tables, comparing the results obtained by the best and poorest farms, in this case each parish supplied its quota of best and poorest farms in making the totals for the averages shown in these cases; otherwise, had the best and poorest farms been selected irrespective of their source, different, but less representative averages would be shown. The above explanations are necessary in order that the reader be afforded a proper interpretation of results.

The desired information was collected by using forms specially prepared for the purpose. Most of the farmers realized the reason and importance of this survey and were quite eager to supply the information sought.

DETERMINATION OF THE LABOUR INCOME

The receipts from all sources were itemized and when totalled together constitute the gross revenue of the farms.

The expenditure of the farm was recorded under several items and the sum-total of these represent the total expenses.

The labour performed by sons of fourteen years of age or over was charged at the same rate as hired labour would have cost in that neighbourhood, thereby placing all the farms on the same level in determining the labour income.

An annual depreciation charge of 10 per cent was levied on machinery and 5 per cent on buildings and live stock.

Interest on total capital was rated at 6 per cent.

By deducting the total expense from the gross revenue, a balance termed the "labour income" is obtained, which represents the money obtained by the farmer and his wife for managing and working the farm. As there are groups of farms included in this survey making no labour income, the term and sign "plus" (+) and "minus" (—) labour income will be used to designate a farm or group of farms making a plus or minus labour income.

DEFINITION OF TERMS

A mature horse or cow equals one animal unit. Colts or young cattle and other classes of stock are fractions of animal units. For the sake of clearness, the following description is given:

Class of Stock		
Cow	1	Equals one animal unit
W-ifer (1 to 3 years)	2	" " " "
Calf (under 1 year)	4	" " " "
Bull	1	" " " "
Steer (feeding)	1	" " " "
Horse	1	" " " "
Colt	2	" " " "
Hog	5	" " " "
Pig	10	" " " "
Sheep	7	" " " "
Lamb	14	" " " "
Poultry	100	" " " "

Cash crop is a common term used to designate any crop that is sold directly for cash.

Crop index is a numerical measure of the crop production of the farm. It is arrived at as follows: The value of all crops grown on all farms surveyed is totalled up and divided by the total crop acres. The resulting number represents 100 per cent crop production. Individual farms having a crop yield higher than this average yield are given a number proportionately higher and those having a lower crop yield are given a number proportionately lower. Thus one farm may have a crop index number of 110, which means that the crop yield on this farm is 10 per cent higher than the average; or the crop index number may be 90, which means that the crop yield is 10 per cent lower than the average.

Live stock index is a numerical measure of the live stock production of the farm obtained in the same way as the crop index, using the total live stock revenue and the total animal units as factors.

Tilled area is the number of acres of land on a farm which have been brought under cultivation.

Crop acres is the number of acres of land from which a cultivated or a pasture crop is taken.

TABLE I-SIZ OF FARMS AND LABOUR INCOME

Size	Acres 40-80	Acres 81-100	Acres 101-120	Acres 121-140	Acres 141-160	Acres 161-180	Acres 181-200	Acres 201-more
Number of farms.....	No.	50	42	31	27	15	12	24
Average size.....	Ac.	71	102	125	150	169	189	280
Average tilled acres.....	Ac.	58	81	112	129	137	159	179
Average crop acres.....	Ac.	63	92	112	133	150	169	228
Average total capital.....	\$	8,911	12,191	14,397	16,352	20,357	21,441	28,574
Average capital in real estate.....	\$	6,257	8,852	10,976	12,528	15,288	16,539	22,462
Average per cent capital in real estate.....	%	46.5	52.6	58.3	57.6	69.0	64.6	65.9
Average capital in buildings.....	\$	2,219	2,462	2,379	2,465	3,033	2,975	3,371
Average per cent capital in buildings.....	%	24.9	20.2	17.6	17.5	14.9	13.8	11.7
Average capital in machinery.....	\$	1,019	1,244	1,209	1,435	1,820	1,504	2,023
Average per cent capital in live stock.....	%	11.4	10.2	8.8	8.6	8.9	7.6	7.1
Average capital in live stock.....	\$	1,835	2,065	2,152	2,609	3,209	3,117	4,379
Average per cent capital in live stock.....	%	7.2	17.0	15.0	16.1	16.2	14.5	15.2
Average crop acres per man.....	Ac.	5.0	53.4	67.0	68.0	64.3	73.2	84.5
Average crop acres per horse.....	Ac.	24.4	27.2	32.0	33.8	32.9	37.4	32.4
Average animal unit.....	A.U.	14.5	21.1	27.0	24.7	28.1	31.6	35.3
Average live stock index.....	No.	101.2	94.9	64.5	101.5	99.7	96.2	110.2
Average crop index.....	No.	123.6	123.2	103.7	89.4	97.9	87.6	81.4
Average revenue from cash crop.....	\$	478	758	694	645	965	1,016	1,231
Average revenue from live stock.....	\$	215	362	256	314	348	332	614
Average revenue from butter, milk, and cheese.....	\$	765	1,091	1,266	1,461	1,857	1,832	2,285
Average revenue from swine.....	\$	203	246	302	256	321	346	389
Average revenue from sheep and wool.....	\$	27	20	18	40	63	75	61
Average revenue from poultry and eggs.....	\$	35	44	32	52	65	89	34
Average total revenue.....	\$	1,723	2,521	2,498	2,768	3,649	3,691	4,534
Average cost of lab.....	\$	220	394	413	486	797	796	930
Average amount of feed bought.....	\$	156	273	275	300	444	376	525
Average current expenses.....	\$	131	163	167	202	224	267	279
Average depreciation on buildings, live stock, machinery.....	\$	293	351	363	416	451	455	591
Average interest on capitalization.....	\$	532	723	894	983	1,222	1,286	1,731
Average total expenses.....	\$	1,332	1,914	2,062	2,357	3,179	3,180	4,069
Average labour income.....	\$	+ 391	+ 607	+ 381	+ 601	+ 481	+ 411	+ 474
Average labour income for the best 5 farms.....	\$	+ 2,235	+ 2,524	+ 1,398	+ 1,731	+ 1,636	+ 1,325	+ 2,071
Average labour income for the poorest 5 farms.....	\$	- 438	- 633	- 471	- 563	- 443	- 421	- 986

TABLE 1A—SIZE OF FARMS AND LABOUR INCOME

Size	—	Acres 40-50	Acres 51-100	Acres 101-120	Acres 121-140	Acres 141-160	Acres 161-180	Acres 181-200	Acres 201-more
Average size of farms (crop acres).....	No.	63	92	112	123	150	169	191	228
Average total capital.....	\$	8,911	12,191	14,367	16,252	18,329	20,357	21,441	26,274
Average total revenue.....	\$	1,723	2,521	2,466	2,768	3,117	3,649	3,561	4,384
Average per cent total revenue.....	%	19.3	20.7	17.2	17.0	17.0	17.9	16.7	15.7
Average animal unit.....	No.	14.5	21.1	21.0	24.7	28.1	21.7	21.6	25.3
Average revenue per animal unit.....	\$	83.56	53.55	54.48	53.55	54.6	54.28	51.49	66.28
Average revenue from cash crop.....	\$	478	728	694	645	846	965	1,016	1,231
Average total expenses.....	\$	1,322	1,914	2,052	2,327	2,516	2,179	2,190	2,500
Average per cent total expenses.....	%	14.9	19.7	14.5	14.7	13.7	13.6	14.8	14.0
Average labour income.....	\$	+ 391	+ 607	+ 396	+ 381	+ 601	+ 461	+ 411	+ 474

To obtain and throw some light on the most advantageous size of farm to operate, tables I and IA have been prepared. In studying the labour income in table IA it will be noticed that all groups are making a plus labour income, varying from \$351 to \$607 with an average of \$463. This average labour income is higher than the average labour income for the same districts as reported in the survey of 1919. There are two main reasons for this difference. First, the figures for the farms in the St. Gedeon (Lake St. John) district have been left out. If the reader will refer to the results of the 1919 survey and to table II in the present survey he will note that this district shows in both cases a minus labour income. A closer examination will reveal the fact that the minus labour incomes were due to the extraordinarily high values placed upon the land compared with other districts; that is, interest on capital consumed the profits. The incorporation of the results obtained on these farms in the table would not make a true average for the remaining districts where values are normal, nor would the figures obtained in this survey be comparable with figures obtained on similar surveys made in other provinces. Secondly, owing to higher prices obtainable for 1919 products than were obtainable the previous year, the average revenue from the farms in the present survey is much higher. The expenditure not having increased in proportion it leaves a general higher average labour income.

The figures given in tables I and IA are practically self-explanatory, but it may be well to call the attention of the reader to some of the outstanding facts. In the first place it will be noticed that the plus labour income does not increase in the same ratio as the size of the farms, as some might expect. There is a difference of \$236 in favour of the group of farms varying in size from 81 to 100 acres and a difference of only \$63 between the average of the smallest and the average of the largest farms. This shows that there is a tendency for farms of certain definite sizes to give larger labour incomes than a little larger or a little smaller farms.

Similar surveys conducted in other provinces and in the United States have revealed the fact that there are odd-sized farms which are too large for one and too small for two men; others are too large for two and too small for three men. On these odd-sized farms, with the exception of some on which specialization on some particular crop is practised with success, large average labour incomes come possible only through intensification of the system of farming and good farm management.

The results of this survey would appear to confirm the findings arrived at elsewhere and to demonstrate, through the above tables, that the most advantageous size of farms to operate are one-man farms of from 81 to 100 acres, two-men farms of from 141 to 160 acres and three-men farms of 200 acres or more. The writer realizes that there are many factors affecting the matter of advantageous size, such as type of farming followed, nature of the soil of the farm, location, number and age of children, available labour in district, and the knowledge and managerial ability of the farmer. The results obtained through the farm survey of the above groups reveals the following information: Percentages of farms receiving a plus labour income of \$600 or more according to size: 40 to 80 acres, 21 per cent; 81 to 100 acres, 38 per cent; 101 to 120 acres, 33 per cent; 121 to 140 acres, 35 per cent; 141 to 160 acres, 52 per cent; 161 to 180 acres, 48 per cent; 181 to 200 acres, 23 per cent; 200 and more acres, 50 per cent.

These figures substantiate the claim made that there are certain sized farms preferable to others, and further show that there are greater possibilities of farms of large acreage making a larger labour income, and also of providing a safe investment for capital which has a tendency to increase in value.

In studying the factors influencing the labour income of the various groups it will be noticed, in table IA, that the per cent cost of total expenses remain very nearly constant for all groups, the greatest deviation from the average either up or down being 1.2 per cent, regardless of capital invested or size of farms. It will also be

noticed in this table that the average revenue per animal unit, with the exception of two groups, is very nearly constant. Further that the increased labour income obtained in some of the groups of the various groups of farms studied is not explained by getting a proportional increased revenue from cash crop sources, but by having a larger number of animal units for a given number of acres, making possible an average gross per cent revenue exceeding the average total expenses. The wider the margin the greater becomes the labour income.

Without going into the details of revenue or expenses, which are plainly set out in the tables, the information obtained through this survey would go to show, first, that certain sized farms are to be preferred to others; secondly, that there is a greater percentage of high labour income obtained on the larger farms; and thirdly, that fair to high labour incomes are possible on the smaller farms where good managerial ability is applied.

TABLE II—LABOUR INCOME BY DISTRICT

District		Aubrey (Chateau- guay Co.)	Lachute (Argen- teuil Co.)	L'As- sompion	Mont- magny	Stan- bridge East (Missis- quoi Co)	St. Gedeon (Lake St. John Co)
Number of farms.....	No.	52	50	52	51	49	48
Average size.....	Ac.	120	165	136	118	162	109
Average tilled area.....	Ac.	113	115	115	100	85	135
Average crop acres.....	Ac.	118	145	121	107	132	149
Average total capital.....	\$	13,841	15,795	16,575	14,036	17,480	35,173
Average capital in real estate.....	\$	10,374	11,718	12,561	11,010	12,792	30,219
Average per cent capital in real estate.....	%	57.0	57.7	58.0	59.9	57.5	76.2
Average capital in buildings.....	\$	2,473	2,594	2,956	2,602	2,733	3,414
Average per cent capital in build- ings.....	%	17.9	16.4	17.8	18.5	15.7	9.7
Average capital in machinery.....	\$	1,413	1,404	1,632	1,130	1,298	1,576
Average per cent capital in machinery.....	%	10.2	8.9	10.0	8.5	7.4	4.5
Average capital in live stock.....	\$	2,054	2,673	2,300	1,896	3,390	3,378
Average per cent capital in live stock.....	%	14.8	16.9	14.2	13.5	19.4	9.6
Average crop acres per man.....	Ac.	64.0	73.0	54.8	56.5	67.2	66.2
Average crop acres per horse.....	Ac.	29.5	31.8	33.0	34.8	24.7	35.8
Average animal unit.....	A.U.	19.7	25.8	22.2	18.6	27.6	33.9
Average live stock index.....	No.	83.1	105.8	108.4	105.5	99.2	88.0
Average crop index.....	No.	104.2	80.3	149.2	97.1	76.6	98.1
Average revenue from cash crop sold.....	\$	746	381	1,530	628	428	778
Average revenue from live stock sold.....	\$	236	348	327	290	504	333
Average revenue from butter, milk, or cheese sold.....	\$	926	1,708	1,232	941	1,871	1,523
Average revenue from swine sold.....	\$	170	155	283	335	287	501
Average revenue from sheep or wool sold.....	\$	15	28	35	58	46	141
Average revenue from poultry or eggs.....	\$	39	40	62	37	30	26
Average total revenue.....	\$	2,132	2,600	3,460	2,269	3,166	3,302
Average cost of labour.....	\$	381	445	642	426	512	675
Average amount of feed bought.....	\$	129	306	228	89	632	12
Average current expenses.....	\$	178	190	198	147	202	324
Average depreciation on build- ings, live stock and mach- inery.....	\$	368	404	429	330	436	404
Average interest on capital in- vested.....	\$	831	950	992	842	1,049	2,111
Average total expenses.....	\$	1,887	2,364	2,489	1,843	2,831	3,626
Average labour income.....	\$	+245	+296	+980	+446	+335	-324

In order to study the farming business in different parts of the province and the farms following different types of farming, table II has been prepared. The reader will kindly remember, as explained in the preamble, that the farms supplying the information in the above table were situated in four or five parishes surrounding the particular district mentioned.

It will be remarked that all districts, except that of St. Gedeon (Lake St. John) are making a small plus labour income. The general average results obtained, though slightly better, concur with those obtained in last year's survey. To analyze, in more detail, the data embodied in the averages of the above table, the following two tables have been prepared.

TABLE III.—A COMPARISON OF THE BEST AND POOREST 10 FARMS PER DISTRICT

District Number of Farms	Aubrey (Chateaugay Co.)		Lachute (Argenteuil Co.)		L'Assomption		Montreal		Stanbridge East (Missquoi Co.)		St. Gedeon (Lakes St. John Co.)	
	Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10
Average size.....	164	112	162	210	153	116	112	140	163	153	100	216
Average tilled area.....	147	103	112	137	137	95	95	108	86	86	158	138
Average crop acres.....	153	107	136	163	141	104	104	120	137	133	167	173
Average total capital.....	10,632	12,180	15,932	18,734	19,588	13,222	13,097	15,008	13,567	15,270	42,230	20,168
Average per cent capital in real estate.....	15,209	9,338	11,438	13,722	14,764	9,976	10,095	12,530	9,307	11,903	36,630	34,015
Average capital in buildings.....	62.7	60.2	51.7	59.4	57.4	57.9	57.2	64.3	55.9	55.9	77.3	78.7
Average per cent capital in buildings.....	2,900	2,130	3,100	2,560	3,690	2,350	2,600	2,480	2,410	3,060	3,860	2,189
Average capital in machinery.....	14.8	17.4	20.1	13.8	18.3	18.0	19.8	15.9	17.8	20.1	9.4	8.1
Average per cent capital in machinery.....	1,880	1,340	1,260	1,920	2,040	1,330	1,160	1,195	1,210	1,160	1,600	1,600
Average capital in live stock.....	9.6	11.0	8.1	10.3	10.4	10.0	9.0	7.7	9.0	7.7	4.0	4.3
Average per cent capital in live stock.....	2,543	1,522	3,204	3,092	2,784	1,926	1,822	1,893	3,030	2,468	3,900	3,473
Average crop acres per man.....	12.9	12.4	20.1	16.5	14.3	14.6	13.9	12.1	23.2	16.2	9.2	8.9
Average crop acres per horse.....	67.5	61.5	67.4	80.3	53.0	56.9	60.0	51.2	74.1	57.3	81.7	51.7
Average animal unit.....	32.9	30.5	29.2	33.2	36.2	26.7	32.9	23.0	24.9	23.8	43.8	32.5
Average live stock index.....	22.4	14.0	29.2	29.7	26.8	18.3	18.1	18.6	20.2	24.6	30.7	34.5
Average crop index.....	101.8	62.6	117.3	97.2	115.8	80.0	160.3	74.0	119.5	77.0	92.2	82.0
Average revenue from cash crop.....	125.8	81.3	100.6	71.6	217.0	96.8	138.3	79.4	50.4	69.5	107.7	86.3
Average revenue from live stock sold.....	1,603	401	721	164	3,060	563	1,000	449	590	185	1,593	694
Average revenue from butter, milk or cheese sold.....	426	99	427	388	435	212	365	361	363	368	453	312
Average revenue from swine sold.....	1,303	525	2,086	1,904	1,741	802	977	896	2,137	1,214	1,894	1,441
Average revenue from sheep or wool sold.....	140	99	319	87	340	115	457	297	259	315	576	485
Average revenue from poultry or eggs sold.....	11	5	20	40	61	34	53	65	50	25	155	125
Average total revenue.....	52	14	51	25	579	78	20	29	29	33	24	31
Average cost of labour.....	1,143	3,624	2,608	5,709	1,804	2,992	1,987	3,538	2,079	4,969	3,078	3,078
Average amount of feed bought.....	593	375	510	595	763	533	392	660	459	710	700	973
Average current expenses.....	155	95	343	635	320	183	122	81	523	495	10	8
Average depreciation on buildings, live stock and machinery.....	213	174	200	237	223	154	161	161	173	214	363	373
Average interest on capital.....	470	316	440	476	527	347	339	333	394	398	543	498
Average total expenses.....	1,178	730	957	1,175	763	786	786	936	814	918	2,533	2,356
Average labour income.....	2,609	1,690	3,057	2,010	1,770	2,176	2,331	2,176	2,331	2,735	4,168	4,307
	+ 926	- 547	+ 1,165	- 449	+ 2,678	- 306	+ 1,222	- 189	+ 1,207	- 656	+ 531	- 1,129

TABLE II
LABOUR INCOME

■ Best 10 farms (Plus)
■ Poorest 10 farms (Minus)

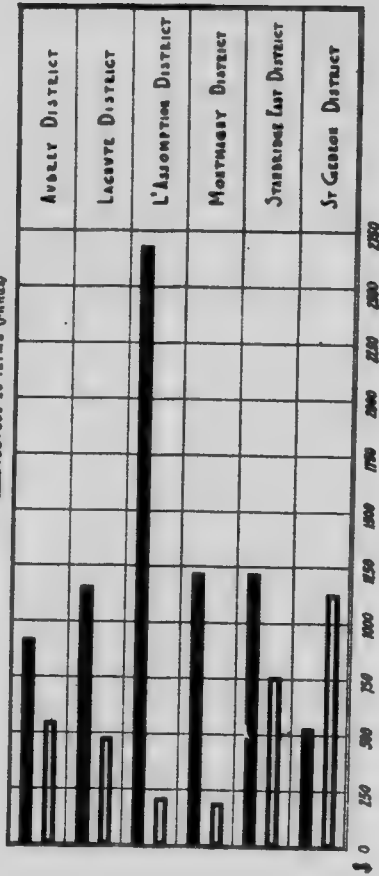
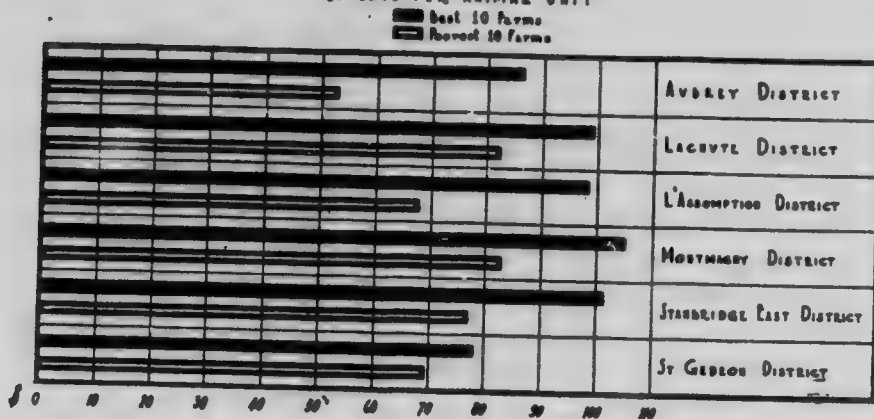


TABLE IIIA—A COMPARISON OF THE BEST AND POOREST FARMS

District — Farms		Aubrey (Chateaugay Co.)		Lachute (Argenteuil Co.)		L'Assomption		Montmagny		Stanbridge East (Missisquoi Co.)		St. Germain (Lake St John Co.)	
		Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10	Best 10	Poor- est 10
Average size of farms (crop acres).....	Ac.	153	107	136	133	141	104	104	120	137	123	167	173
Average total capital.....	\$	19,632	4,180	15,952	18,724	19,593	13,097	13,097	15,003	13,567	15,370	42,220	39,166
Average total revenue.....	\$	3,535	1,143	3,024	2,603	5,709	2,992	2,992	1,867	3,533	2,079	4,000	3,071
Average per cent total revenue.....	%	18.0	9.4	22.7	13.9	29.1	22.8	22.8	13.7	26.1	13.6	11.1	7.9
Average animal unit.....	No.	22.4	14.0	29.2	23.7	28.8	18.1	18.1	13.6	20.2	24.6	20.7	24.5
Average revenue per animal unit.....	\$	86.25	53.00	99.42	83.30	93.10	105.08	105.08	83.60	101.30	76.90	100.00	69.30
Average revenue from cash crop.....	\$	1,803	401	721	164	3,080	1,090	1,090	449	860	185	1,396	624
Average total expenses.....	\$	2,609	1,690	2,459	3,037	3,031	1,770	2,176	2,176	2,331	2,735	4,148	4,267
Average per cent total expenses.....	%	13.3	13.9	15.4	16.3	15.1	13.5	13.5	13.9	17.2	17.9	9.8	10.7
Average labour income.....	\$	+926	-547	+1,165	-449	+2,678	+1,222	-160	-160	+1,207	-666	+531	-1,126

TABLE II
REVENUE PER ANIMAL UNIT



The findings of tables III and IIIA ought to be of great interest, not only to students of farm conditions, but also to every farmer, regardless of whether he has made a success of his calling or not. These tables are interesting because they show the existing possibilities of success in farming and demonstrate what line of action must be followed if success is to be attained.

Here again it will be remembered that these groups of the ten best and ten poorest farms are made up by having each parish in the vicinity of the centre mentioned, supply its proportional quota of best and poorest farms to form the respective groups of ten farm averages.

It will be noticed that the highest average labour income for the ten best farms is obtained in L'Assomption district, and that the lowest average labour income for the ten poorest farms is obtained in St. Gedeon district. The reasons accounting for these very striking differences are the same as those given in last year's survey. The high plus labour income obtained in the L'Assomption district is due to the high average gross income received from the cash crops sold, over fifty per cent of this revenue being from tobacco growing and truck farming. The low minus labour income of the St. Gedeon district is due in part to the high value placed upon the real estate, said value being twenty per cent above the average of the other groups. This, and the relatively low returns per animal unit, are the principle reasons for the poor returns.

If we study some of the factors influencing success and failure in the operation of the ten best and ten poorest farms in the Aubrey district, what do we see? We have, to start with, a plus labour income of \$926 for the average of the ten best farms against a minus labour income of \$547 for the average of the ten poorest farms. How is this difference of labour income to be accounted for? We will notice that the average size of the farms for these two groups varies, being 153 crop acres for the ten best farms, against 107 crop acres for the ten poorest farms, a difference in size which may or could be a contributing factor. The proportion of capital invested, its distribution, the crop acres per man and per horse, are all very nearly alike for both classes of farm, while the proportion of animal units kept is higher in the case of the ten poorest farms. Furthermore, the average operating expenditure is higher in the poor farms than in the better farms, a factor which should be in favour of the former. Yet it will be observed that the average return on capital invested in the case of the ten poorest farms is 8.6 per cent lower than in the case of the ten best farms. One explanation lies in the fact that a much smaller revenue was obtained from cash crops by the ten poorest farms

than by the ten best farms. A more important factor, however, is the return per animal unit, which was \$33.25 less in the case of the ten poorest farms. This low revenue per animal unit is often due to keeping too many horses for the work done, causing the loss of feed, pasture and time that other stock would have used to better advantage. In some other cases, the sources of revenue from animals is too limited, that is, no sheep, no hogs, and sometimes even no poultry are kept, leaving the cows to be the main source of revenue. If, under these circumstances, these cows are of poor quality or badly fed, the results cannot help but be disastrous. In other cases, the distribution of stock is fairly representative, but the quality and the management of it is so poor that nothing but failure can be expected.

A close analysis of the data for other districts will allow of the same deductions in practically every case. A study of other groups will show that the size of the farm is not the only factor influencing success.

A very interesting point to observe in the above tables is the fact that the groups of farms which have a high revenue per animal unit are invariably the farms which have a high cash crop revenue, indicating that high revenue per animal unit makes possible high revenue from cash crop sources.

Another interesting point in the above tables is that, with the exception of L'Assomption district, the percentage of capital used in paying the operating expenses is almost the same for the ten best and the ten poorest farms of any one district, the variation being less than one per cent, regardless of whether the farm is yielding a high or a low labour income. This would go to support the claim that the cost of operation is fairly constant. It may vary slightly between districts, due to type of farming followed and kind of farm operated, but seldom varies to a noticeable degree within a district. It also shows that it is only possible to obtain a reasonable plus labour income by arranging or planning the system of farming to have sources of revenue that will make the *per cent total revenue* exceed the *per cent total expenses*.

SPECIALIZED OR GENERAL FARMING

As there is in the minds of many interested parties considerable uncertainty as to the most profitable type of farming to follow, the tables IV and IVA have been prepared. The farms included in the three groups which compose these are farms from the counties of Argenteuil, Chateauguay and L'Assomption, each county supplying almost an equal number of farms to the three groups. Hence, the results obtained for these three groups are as representative as it is possible to have them for such purpose.

The group, "Dairy Farming for City Trade," includes farms which produced milk which was sold for city consumption. Some additional revenue was obtained from cash crops similar to those grown on the farms of the other two groups, but the revenue from this source was limited.

The second group, "Dairy Farming Plus a Cash Crop," takes in farms that sold their milk through the butter or cheese factory and on which seventy per cent of the cash crop revenue was composed of crops not marketable through the live stock, such as clover seed, grass seed, fruit, maple sugar, tobacco and vegetables.

The third group, "General Dairy Farms," comprises all the farms not entering in groups one and two, and of which, in most cases, the leading cash crops were hay and grain.

TABLE IV—SPECIALIZED OR GENERAL FARMING

		Dairy farming for city trade	Dairy farming plus a cash crop	General Dairy Farms
Number of farms.....	No.	51	43	55
Average size.....	Ac.	161	153	153
Average tilled area.....	Ac.	116	81	109
Average crop acres.....	Ac.	141	121	137
Average total capital.....	\$	16,063	17,100	16,703
Average capital in real estate.....	\$	11,763	12,710	12,744
Average per cent capital in real estate.....	%	55.9	56.8	59.4
Average capital in buildings.....	\$	2,776	2,664	2,524
Average per cent capital in buildings.....	%	17.3	15.5	16.9
Average capital in machinery.....	\$	1,425	1,536	1,433
Average per cent capital in machinery.....	%	8.9	8.9	8.5
Average capital in live stock.....	\$	2,875	2,864	2,556
Average per cent capita. in live stock.....	%	17.9	16.8	15.2
Average crop acres per man.....	Ac.	68.6	66.8	67.4
Average crop acres per horse.....	Ac.	31.1	26.1	29.9
Average animal unit.....	A.U.	27.2	23.6	23.9
Average live stock index.....	No.	112.4	109.3	96.9
Average crop index.....	No.	94.0	119.0	92.5
Average revenue from cash crop.....	\$	560	1,000	834
Average revenue from live stock.....	\$	385	318	327
Average revenue from butter, milk or cheese.....	\$	2,006	1,506	1,370
Average revenue from swine.....	\$	124	278	322
Average revenue from sheep and wool.....	\$	41	38	33
Average revenue from poultry and eggs.....	\$	44	45	51
Average total revenue.....	\$	3,160	3,194	2,836
Average cost of labour.....	\$	494	594	530
Average amount of feed bought.....	\$	445	406	293
Average current expenses.....	\$	201	197	196
Average depreciation on buildings, live stock and machinery.....	\$	426	429	408
Average interest on capitalization.....	\$	967	1,027	799
Average total expenses.....	\$	2,533	2,653	2,428
Average labour income.....	\$	+627	+541	+408

TABLE IVa—SPECIALIZED OR GENERAL FARMING

		Dairy farming for city trade	Dairy farming plus a cash crop	General Dairy Farms
Number of farms.....	No.	51	43	55
Average size of farms (crop acres).....	Ac.	141	121	137
Average total capital.....	\$	16,063	17,100	16,703
Average total revenue.....	\$	3,160	3,194	2,836
Average per cent total revenue.....	%	19.7	18.7	17.0
Average animal unit.....	A.U.	27.3	23.6	23.9
Average revenue per animal unit.....	\$	95.24	92.55	83.77
Average revenue from cash crop.....	\$	560	1,000	834
Average total expenses.....	\$	2,533	2,653	2,428
Average per cent total expenses.....	%	15.8	15.5	14.5
Average labour income.....	\$	+627	+541	+408

At the outset it will be noticed that all three groups are making a small plus labour income with a difference of \$219 in favour of the group "Dairy Farming for City Trade." The percentage of capital used in paying operating expenses is almost similar for group 1, "Dairy Farming for City Trade," and group 2, "Dairy Farming plus Cash Crop," and is one per cent less for group 3, "General Dairy Farms." It will also be noticed that the total capital invested and the gross revenue are very similar for

all groups. Group 1 has a higher number of animal units and receives a slightly higher revenue per unit than group 2 and over \$11 more per animal unit than group 3. Group 2 receives over 73 per cent of its revenue from its cash crop and has a correspondingly small number of animal units. However, the higher revenue received from the cash crop items helps to make a gross revenue and labour income ranking next to that of group 1.

The third group, "General Dairy Farms," includes a type of farm which is quite popular. Many of the farmers of this group are following the line of least resistance. A few cows are kept, some hay and grain is sold, which with incidental revenue from other sources, helps to make a gross revenue that may cover the total expenses and sometimes leaves a small labour income. In such systems of farming, however, the maintenance of soil fertility and, hence, of the farm's value, is not taken into consideration. If it were, it is obvious that some other type of farming would be followed. Anyone familiar with farm conditions knows that where the quality of the animals kept is high a corresponding appearance of thrift is found about the farm as a whole, that cannot be recorded in figures but that is noticed by the visitor or passer-by. This appearance of thrift is often further substantiated by finding on such farms more highly educated people, homes with more comforts and conditions generally surrounding the farms indicative of progress and content.

The results of the survey of the above three types of farming concur closely with the findings of last year's agricultural survey and further demonstrate that the possibility of making a plus labour income does not vary greatly with any type of farming. If the gross revenue is higher with a particular type, the total expenses of operation are often correspondingly high. It also demonstrates that the question of a fair plus labour income is not so much a question of location and type of farming as a question of good management within the type chosen. Had a comparative table of a certain number of best and poorest farms of each group been included also for the above tables (IV and IV A) it would have been noticed that high plus labour incomes and low minus labour incomes were obtained by farms of all groups with very little difference within each. It is not so much a question of type of farming as it is a question of good management assuring a per cent gross revenue that will exceed the per cent total expenses.

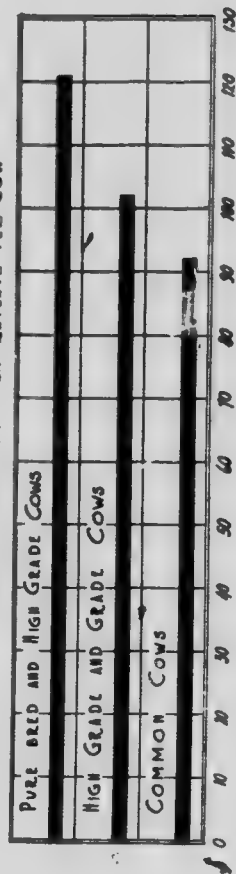
THE PURE-BRED SIRE AND THE REVENUE OF THE COWS

Much is being said and written about the use of pure-bred dairy sires in grading up the grade and common dairy herds to improve their milk-producing qualities. To ascertain and demonstrate the truth of such claims table V has been prepared.

In studying this table, it will be noticed that the information obtained was recorded for each district and subdivided into three groups: Group 1, "Pure-bred and High Grade Cows," includes all farms with dairy herds that are composed of pure-bred and high grade cows. Naturally, such herds are headed by a pure-bred sire. Group 2, "High Grade and Grade Cows," represents herds which have been headed by a pure-bred sire for a considerable number of years, so that some of the animals may have as high as four crosses of pure-bred blood and others only one cross. Group 3, "Common Cows," is made up of herds that have never had a pure-bred sire at their head and consequently represent nondescript breeding.

TABLE V—QUALITY OF COWS, MILK REVENUE AND LABOUR INCOME

District	No. of Farms	Pure-Bred and High Grade Cows	Average Milk Revenue for Cow	Average Labour Income	High Grade and Grade Cows	Average Milk Revenue per Cow	Average Labour Income	Common Cows	Average Milk Revenue per Cow	Average Labour Income
	No.	Avg. No.	\$	\$	Avg. No.	\$	\$	Avg. No.	\$	\$
Aubrey.....	47	14	95	+ 72	12	105	+ 512	6	80	- 37
Lachute.....	50	19	111	+488	16	115	+ 265	12	115	+225
L'Assomption.....	51	13	121	+927	14	110	+1,399	10	103	+892
Montmagny.....	50	11	101	+850	12	96	+ 528	9	92	+163
Stanbridge East.....	48	25	153	+949	15	100	+ 209	12	96	+100
St. Gedeon.....	48	14	107	-289	21	87	- 84	16	81	-473
Average for all districts.....	49	16	121	+500	15	102	+ 455	11	92	+112

TABLE V
QUALITY OF COWS AND MILK REVENUE PER COW

The information embodied in the above table covers, as stated previously, part of six counties, each county supplying a certain number of cows taken from four or five different parishes. The first group, "Pure-bred and High Grade Cows," has 61 farms and 989 cows, or 20 per cent of the farms and 25 per cent of the cows. The second group, "High Grade and Grade Cows," includes 93 farms with 1,421 cows, or 32 per cent of the farms and 36 per cent of the cows. The third group, "Common Cows," has 140 farms with 1,521 cows, representing 48 per cent of the farms and 39 per cent of the cows.

In studying the average revenue obtained per cow for each group, it will be noticed that groups 2 and 3 for Lachute district received the same revenue per cow, which was \$4 more than that received by group 1. The explanation for this seeming anomaly is that a greater percentage of farmers in group 3 were selling their milk to the city than in groups 1 or 2, and were also receiving more revenue from other sources. The same explanation is also applicable to group 1 of the Aubrey district. This explanation is based on the results as shown for districts which are not selling any milk for city trade.

However, in spite of these exceptions, the averages of the figures for all districts give sufficient proof of the importance of the use of a pure-bred sire in improving the quality of the dairy herds and consequently increasing the labour income. It will be observed that the average revenue per cow is \$121 for group 1, "Pure-bred and High Grade Cows," \$102 for group 2, "High Grade and Grade Cows," and \$92 for group 3, "Common Cows." This is a difference in revenue per cow of \$19 between groups 1 and 2, and \$29 between groups 1 and 3. Strangely enough, this difference in milk revenue of \$29 between groups 1 and 3 was the identical result obtained in the same table in last year's survey.* Owing to the prevailing higher price for milk, cheese and butter in 1919 than in 1918, a slightly higher average revenue per cow was made, which enabled some farmers to make small average labour incomes, but in spite of this the variation in revenue per group of cows was maintained and further substantiates the claim made that great losses are suffered annually by the owners of common cows, which losses reflect indirectly on the province. If one stops to think for a moment that groups 2 and 3 represent 36 per cent and 39 per cent respectively, or 75 per cent of all the cows, the possibilities in losses are enormous. Granting an annual loss of at least from \$15 to \$20 per cow, and multiplying this loss by the average number of cows per herd in the farms surveyed, which is 13, it must be concluded that each of the farms included in these groups of medium to poor cows is losing annually from \$195 to \$260 through not using pure-bred bulls. These findings are further corroborated by the difference in labour income obtained by the farms composing these groups.

These results, which are well-known facts to those familiar with the situation, are of a nature to stimulate the activities of the various dairy cattle breeders' associations, as well as the other associations which have the dairy industry and the welfare of the farmers in trust or at heart. Means should be devised to encourage the breeding, raising, distribution or exchange, and retention of every sire of quality. At present there are too many good pure-bred sires of quality that are slaughtered, before they have outlived their usefulness, through lack of knowledge of conditions and lack of organization. A certain number of possible sires are never raised for breeding purposes, but there is a great number of others which should never have been registered and used. This enquiry shows most conclusively that the sires used might be exemplified as the hub of the dairy industry upon the strength or weakness of which part depends success or failure. A condition which causes an annual loss to the dairy industry alone of well over \$10,000,000 is deserving of very high consideration. Every student of farm economics knows:—that where there are poor cows on a dairy farm the revenue is correspondingly poor; that a livelihood on such a farm is possible only by practising the most rigid economy; that improvements

*Bulletin 96, Farm Business. Can. Exp. Farm, Table V.

of any kind are practically impossible; that life under these conditions becomes a burden; that funds with which to educate the growing family are often lacking; and that the family often keep up the farm instead of the farm keeping them; all of which breed discontent. Such conditions are expressed by an annual migration to the cities of a very large number of boys and girls, who are totally unprepared for the life of such centres, while the rural districts are deprived of citizens the loss of whom can be ill afforded. Undoubtedly much of this undesirable condition may be laid at the door of the scrub bull. Yes, all this, because the head of the farm did not stop to think that the milking of poor low producing cows was the road to failure and discontent; did not stop to think that his or her sons or daughters would not be interested in milking, year in and year out, the little, old 3,000 or 4,000 pound cows, to eke out a meagre living. Such conditions breed monotony instead of interest and enthusiasm, and where no interest and enthusiasm exists neither success nor happiness can be achieved. So, before the rising generation becomes dissatisfied with the low returns of the farm and takes the road that leads to the pitfalls and hardships of the city, is the time to send the scrub bull and cows to the abattoir and replace them by individuals of quality.

COST OF MILK PRODUCTION

The reader who has studied the results obtained in the previous tables will have remarked that the revenue from milk, whether in the form of butter, cheese or milk, is in most cases, the biggest item in the total revenue of the farm. It is known from other statistical data that the dairy industry is the basic one of the province and as such brings a huge revenue to its farms, taken collectively. It is also known during these days of high cost of living, what the words "milk" and "milk prices" mean to the average milk and milk product consumer. But what many of us, whether consumer or producer, do not know quite as well, is the milk production situation and its possibilities and shortcomings. So, in order to obtain some light on this question, tables VI and VI-A have been prepared. All the farms in the four districts named in the tables receiving 50 per cent or more of their revenue from milk were used for this tabulation, as any farm receiving less than 50 per cent of its revenue from milk could not be classified as a representative dairy farm.

The total number of pounds of milk produced per farm was obtained by dividing the revenue from milk by the price obtained per hundredweight. The cost of milk per hundredweight was obtained by deducting from the total expense item the revenue received from sources other than milk. The balance left was taken to be the amount it cost to produce the number of pounds of milk produced on that particular farm. Hence the total number of pounds of milk produced divided by the balance cost item gives the cost of milk production per hundredweight.

It will be noticed that for this purpose it is assumed that the other items of revenue of the farm are not produced at a loss. If they were, it would increase the price of milk accordingly. On the other hand if they are produced at a profit, it would lower the cost of production in proportion and leave a wider margin of profit per hundredweight on the milk produced. As the revenue from other items comes from many sources, it is reasonably sound to infer that they are not produced at a loss. In either case they would not affect the labour income of the farms included in these tables, which confirm very largely the profit or loss per hundredweight of milk produced.

An example table showing the method of obtaining the milk cost per hundredweight is here introduced and it will be noticed that no charge is made for the labour of the operator and other unpaid labour as explained elsewhere in this work. Therefore, the margin of profit, where there is one, is the revenue that the operator obtains for his labour, and this labour income is in proportion to the margin of profit per hundredweight as well as the total number of pounds of milk produced.

COST OF MILK PRODUCTION ON FARM No. 43

Size, 85 crop acres.		Revenue from milk..	\$1,760 00
Total capital..	\$14,013	Price obtained per cwt..	2 15
Number of cows..	10	Cost per cwt..	1 40
Milk sold..	21,800 (lb)	Profit per cwt..	0 75
		Labour income..	614 00

Expenses		Revenue Other than Milk.	
Labour hired..	\$ 550 00	Cash, crop..	
Feed bought..	150 00	Live stock..	\$200 00
Current expenses..	203 00	Swine..	600 00
Depreciation..	247 00	Sheep..	
Interest on capital..	721 00	Poultry..	25 00
Total expenses..	\$1,971 00	Total..	\$825 00
Revenue other than milk..	225 00		
Cost of producing milk..	\$1,146 00		
\$1,800 lb. of milk cost..			\$1,146 00
100 lb. of milk cost..			1 40

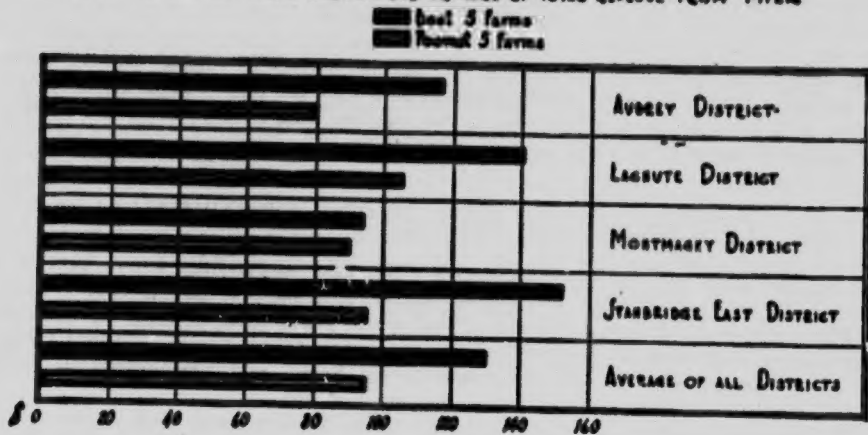
TABLE VI—COST OF MILK PRODUCTION

	—	Aubrey	Lachute	Mont- magny	Stan- bridge East	Average of all Districts
Number of farms.....	No.	20	42	9	29	25
Average size, (crop acres).....	Ac.	108	137	118	141	126
Average total capital.....	\$	14,499	17,828	18,814	16,982	17,028
Average number of cows.....	No.	12.9	15	14	19	15.2
Average amount of milk produced per farm.....	Lbs.	58,000	76,805	56,000	88,524	69,837
Average revenue from milk.....	\$	1,308	1,772	1,322	2,163	1,641
Average revenue from other sources.....	\$	744	794	867	870	819
Average total expenses.....	\$	1,943	2,338	1,973	2,812	2,266
Average cost of production per cwt.....	\$	2.01	2.01	1.97	2.19	2.07
Average price obtained per cwt.....	\$	2.25	2.30	2.36	2.44	2.35
Average profit per cwt.....	\$	+ 0.24	+ 0.29	+ 0.39	+ 0.25	+ 0.28
Average labour income.....	\$	+109	+228	+216	+221	+194

TABLE VI—A COMPARISON OF THE COST OF MILK PRODUCTION ON THE BEST AND POOREST FIVE FARMS

Farms	Aubrey		Lachute		Montmagny		Stanhridge East		Average of all districts	
	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5	Best 5	Poorest 5
Average size (crop acres).....	137	91	118	174	113	124	177	162	136	143
Average total capital.....	\$ 20,965	\$ 13,864	\$ 18,445	\$ 21,003	\$ 17,337	\$ 20,161	\$ 18,869	\$ 20,809	\$ 18,904	\$ 19,146
Average number of cows.....	19	8	19	14	16	12	26	16	20	13
Average amount of milk per cow.....	5,007	3,915	5,870	4,701	3,966	3,892	5,701	4,298	5,219	4,271
Average revenue from milk.....	\$ 2,228	\$ 640	\$ 2,680	\$ 1,460	\$ 1,501	\$ 1,667	\$ 3,940	\$ 1,708	\$ 2,806	\$ 1,221
Average revenue per cow.....	\$ 117	\$ 80	\$ 141	\$ 106	\$ 94	\$ 81	\$ 138	\$ 65	\$ 130	\$ 186
Average revenue from other sources.....	\$ 1,318	\$ 256	\$ 1,153	\$ 705	\$ 908	\$ 742	\$ 1,608	\$ 646	\$ 1,223	\$ 867
Average per cent gross revenue.....	% 17.0	% 6.5	% 20.8	% 10.1	% 13.9	% 9.1	% 28.8	% 11.3	% 26.1	% 9.1
Average total expenses.....	\$ 2,409	\$ 1,614	\$ 2,343	\$ 2,791	\$ 1,866	\$ 2,107	\$ 3,516	\$ 3,309	\$ 2,540	\$ 2,455
Average per cent total expenses.....	% 11.8	% 11.7	% 12.7	% 13.9	% 10.5	% 16.4	% 18.6	% 15.8	% 13.4	% 12.8
Average cost of milk production per cwt.....	\$ 1.21	\$ 4.34	\$ 1.07	\$ 3.17	\$ 1.41	\$ 2.02	\$ 1.35	\$ 3.44	\$ 1.25	\$ 3.26
Average price obtained per cwt.....	\$ 2.34	\$ 2.04	\$ 2.40	\$ 2.25	\$ 2.36	\$ 2.35	\$ 2.03	\$ 2.21	\$ 2.47	\$ 2.26
Average profit obtained per cwt.....	\$ +1.13	\$ -2.30	\$ +1.33	\$ -0.92	\$ +0.95	\$ -0.37	\$ +1.28	\$ -1.23	\$ +1.22	\$ -1.13
Average labour income.....	\$ +1,077	\$ -718	\$ +1,480	\$ -606	\$ +605	\$ -266	\$ +1,924	\$ -865	\$ +1,274	\$ -627

TABLE VIIA
REVENUE PER COW ON FARMS DERIVING 50% OR MORE OF TOTAL REVENUE FROM MILK



A close study of tables VI and VIIA will help to explain why dairy farming, on the whole, does not yield the profits it should, and at the same time reveals the possibilities existing on well-organized and well-managed dairy farms. First, the reader will observe the very striking difference in the cost of milk production for the average of all the farms and for the five best and five poorest farms for each and all districts. It will be noticed in table VI that the average cost of milk production for the farms surveyed is \$2.07, the average price received per hundredweight being \$2.35, leaving a balance of \$0.28 per hundredweight to cover the work performed by the operator and the unpaid labour, or an average labour income of \$194 for 100 farms with farms averaging 126 acres with a total average capital of \$17,028.

A study of table VIIA reveals that there is a variation in average cost of milk production ranging from \$1.21 to \$4.34 per hundredweight. The average cost of milk production on the five best farms of all groups is \$1.26 per hundredweight, while the average cost of milk production on the five poorest farms of all groups is \$3.38 per hundredweight. A difference in the average cost of milk production on the poorest and best farms of \$2.12 per hundredweight should be such as to command serious thinking by dairymen who may be in this group. What is the cause of such a wide difference in the cost of milk production? If we study the average results obtained for the five best and five poorest farms in the Aubrey district, what do we notice? In the case of the five best farms there is an average capitalization of \$20,805, costing 11.8 per cent of the total capitalization for operation. In the case of the five poorest farms there is an average capitalization of \$13,864, costing 11.6 per cent of the total capitalization for operation. That is, operating expenses are practically the same in both classes of farms. However, in comparing the revenue, it will be noticed that the five best farms have an average gross revenue of 17 per cent against 6.5 per cent for the five poorest farms. This difference in revenue for the five best farms is made up by getting from every cow kept 1,092 pounds of milk more per year and also by procuring a higher revenue from the other sources on the farms. The percentage of capital used in operation being practically the same for both groups, the plus gross revenue for the five best farms helps to lower the cost of milk production, leaves a wider margin of profit per hundredweight, and enables the farmers of this group to make a plus labour income of over \$1,000 and practically \$1,800 above the average of the five poorest farms.

A study of all the other groups in the same light, will induce the same conclusion. In some cases the size of the farms and the total capital invested are reversed. But

in all cases the farms producing milk at a profit are the farms which have the highest milk producing cows and also the highest item of revenue from other sources.

A feature worthy of close attention is that with the exception of the Stanbridge East district, the percentage of capital used in operation of all groups does not vary 1 per cent within each district, proving that the percentage of capital used in operation within a district is very nearly constant and that the only way of reducing the cost of milk production is by increasing the number and milk yield of the cows as well as the revenue from other sources of the farm.

FACTORS INFLUENCING SUCCESS IN FARMING

Any one in close touch with any farms operated successfully knows that it is through the application of a number of well-defined factors that success is made possible. These facts having been recorded many years ago, attempts of different natures have been made to intensify their application through such mediums as the agricultural press, the platform, the Experimental Farms and Agricultural Stations, the colleges, the agricultural district representatives, etc.

In order to determine to what extent these factors have been received and applied, a few outstanding ones have been chosen and are reported on in table VII.

TABLE VII—FACTORS INFLUENCING SUCCESS

Districts	Aubrey	Lachute	L'Assomption	Montmagny	Stanbridge East	St. Gedeon	Average of all
	%	%	%	%	%	%	%
Farmers using silo.....	36	46	8	4	61	2	*32
Farmers growing roots.....	19	50	46	37	35	10	33
Farmers growing soiling crops.....	0	16	27	20	6	31	16
Farmers keeping milk records.....	8	8	6	4	14	8	8
Farmers keeping farm accounts.....	23	20	23	8	20	14	18
Farmers receiving farm papers.....	79	82	94	96	73	90	86
Farmers receiving Exp. Farm Publications.....	33	50	33	33	39	22	36
Farmers keeping sheep.....	19	26	63	69	28	96	50
Farmers having or using a pure bred sire.....	21	50	40	45	47	42	41

*4 Districts only.

As will be seen in the above table, only a few factors connected with profitable farming are recorded. As has been stated at the beginning of this bulletin, this work has been undertaken and carried out with the intention of getting first-hand information on the agricultural situation, its possibilities and shortcomings, and also to show in a practical way what factors are applied by successful farmers. With this aim in view practically all tables analysing the farm business, such as the size of farms, the various districts covered in the survey, and cost of milk production, have been prepared on a comparative basis, so that the reader will be able to compare side by side in the same district, and with other districts, the common causes of success of some and of the failure of others. In so doing less space is taken with deductions and the comparative tables submitted offer the most concrete and effective argument to put before those who wish to gain information on how to farm successfully. Hence it is noticed that there are some farms included in all tables which are realizing a profit. The reasons and explanations have been revealed in previous tables and are again confirmed in the above table. The farmers applying the factors recorded in the above table are invariably the farmers included in the group of farms making a plus labour income. On the other hand, the farmers making a minus labour income are the farmers who are often reasoning as follows: that the building of a silo and the using of silage may

be all right, but it costs too much money at the present time; that the growing of roots involves too much labour; that the feeding of soiling crops, when pastures become dry for the cows, is too much bother; that they can select their best cows without keeping milk records; that the keeping of a simple farm account book is a city man's idea of running a farm; that following the Experimental Farm reports and advice is good practice for those having a lot of money to spend; that the farm papers are good reading but not always practical preaching; that they would have to rebuild all their fences to keep sheep and still there would be the dog pest; that their neighbour has had a pure-bred bull and they do not see that their cows are very much better, etc., etc.

These remarks are a few of the many that were heard in doing work of this kind and explain to a certain extent why farming, when interpreted from a business point of view, appears to give such poor results. The possibilities are unlimited. Most of the farmers are anxious to do well, but it would appear that a great deal of extension or educational work will have to be done before the maximum results can be expected from the farms.

GENERAL SUMMARY

The second "Farm Business" survey reveals the following information:—

1. That due to higher prices received for farm produce in 1919, the average labour income was slightly higher for all the farms in 1920.
2. That the size of a farm is a factor to be recognized in buying.
3. That there are possibilities of making high plus labour income on small farms, but this is only by intensive farming and good management. (See tables I and IA.)
4. That there are districts where the farms, by a different type of farming or through less capital being required, are making a higher average labour income than others. (See table II.)
5. That the percentage of total capitalization used in operating a farm is about constant within each district and that the labour income will increase in proportion to the increase of the revenue over the cost of operation.
6. That the greatest opportunity of increasing the revenue is through increasing the revenue per animal unit by using animals of higher quality and increasing the revenue from the cash crops by using better farming methods. (See tables III and IIIA.)
7. That there are possibilities of making fair labour incomes with all types of farming, but the farms carrying good dairy cattle in fair numbers, without neglecting other sources of revenue, are the most successful. (See table V.)
8. That the use of pure-bred or high grade cows is the key to successful dairy farming.
9. That the scrub bull is causing the province an annual loss of well over \$10,000,000 at a very low estimate. (See table V.)
10. That the dairy cow is the "factory" where most of the crops of the farms are transformed before reaching the market, and that this "factory" cannot produce an article of quality cheaply if the "raw material" supplied is poor in quality and limited in amount.
11. That the average cost of milk production for the farms surveyed receiving more than 50 per cent revenue from milk, is \$2.07 per hundredweight.

12. That the price obtained per hundredweight for milk produced was \$2.35. That the difference between the cost and selling price left the farmers on these farms an average plus labour income of \$194, on farms averaging 125 acres, having an average total capital of \$17,028, carrying an average of 15.2 cows producing an average of 69,837 pounds of milk. (See table VI.)

13. That the cost of producing 100 pounds of milk varies in direct proportion to the quality of the cows kept and the attention given to revenue from other sources.

14. That the farms receiving a high revenue from their cows are also the farms receiving a high revenue from other sources.

15. That the percentage of capitalization used in farm operation is as high (excepting one group) for the poorest as it is for the best dairy farms. (See table VIA.)

16. That there are many essential factors, influencing successful farming, which are very little understood or applied by the average farmer, consequently more extension work should be carried on.